FIG.1

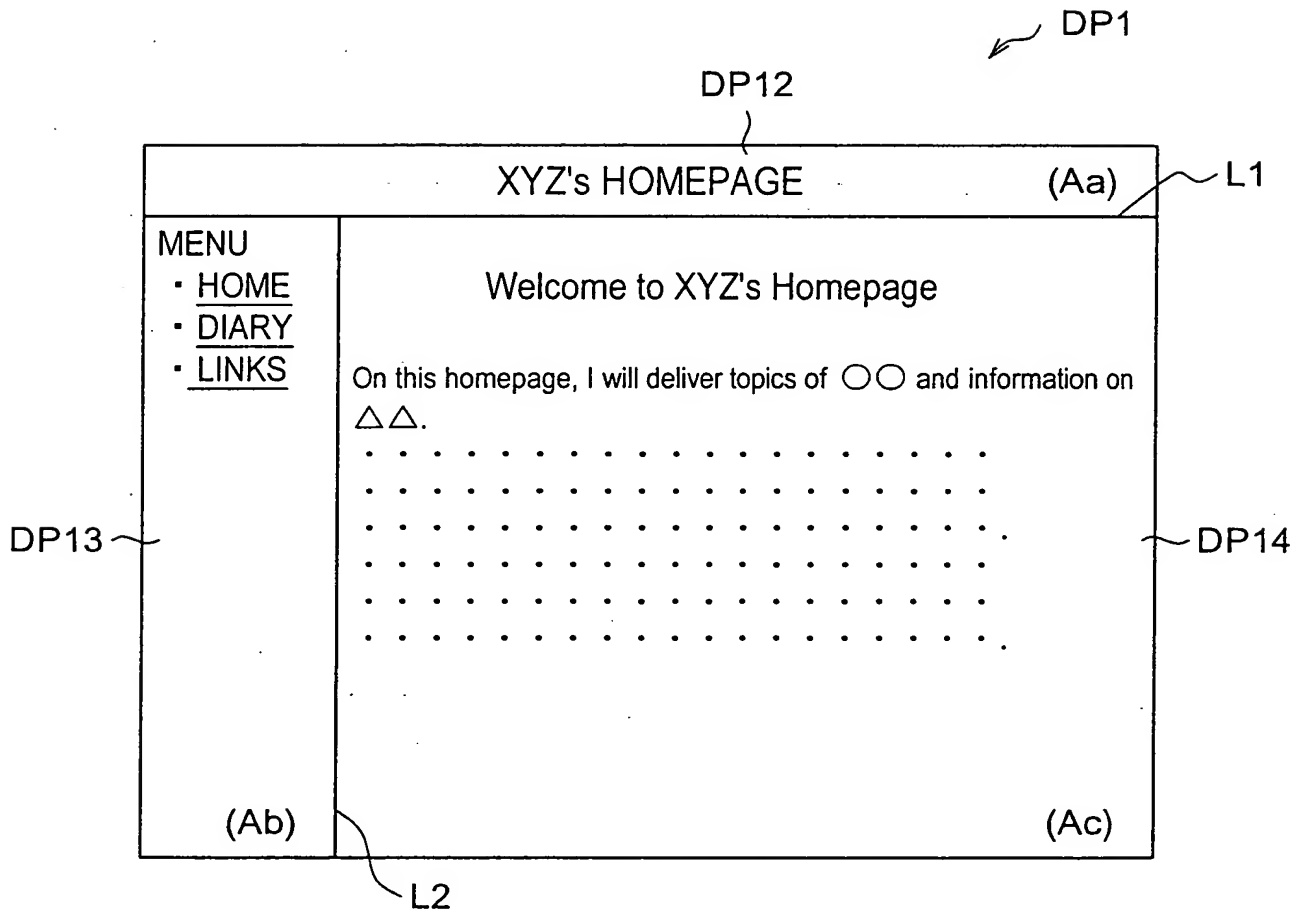

DP1
DP12
XYZ's HOMEPAGE
(Aa)
L1
MENU
• HOME
• DIARY
• LINKS
Welcome to XYZ's Homepage
On this homepage, I will deliver topics of ○○ and information on △△.
DP13
DP14
(Ab)
(Ac)
L2

FIG.2

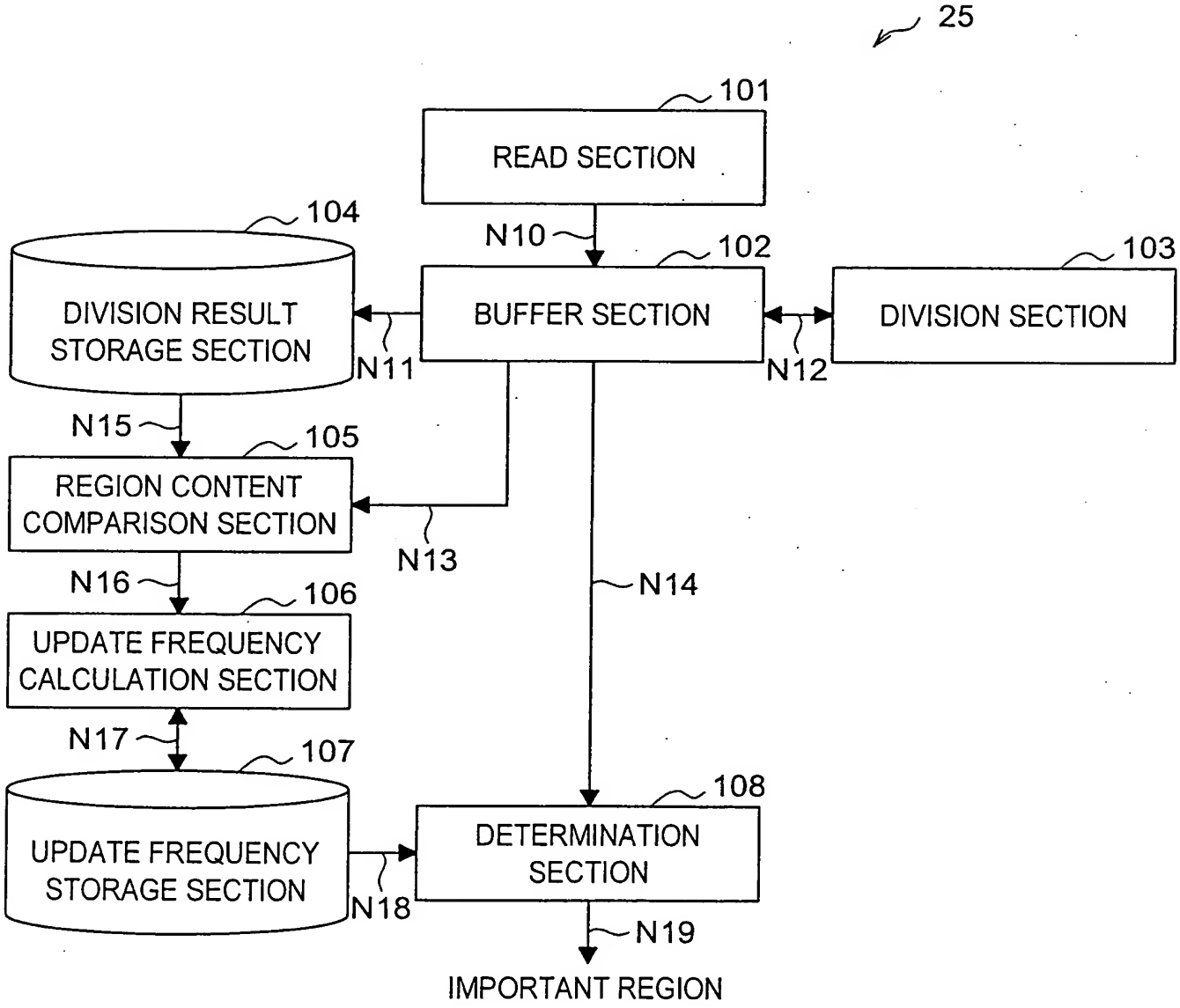

25
101
READ SECTION
N10
102
BUFFER SECTION
103
DIVISION SECTION
104
DIVISION RESULT STORAGE SECTION
N11
N12
N15
105
REGION CONTENT COMPARISON SECTION
N13
N14
N16
106
UPDATE FREQUENCY CALCULATION SECTION
N17
107
UPDATE FREQUENCY STORAGE SECTION
N18
108
DETERMINATION SECTION
N19
IMPORTANT REGION

FIG.3

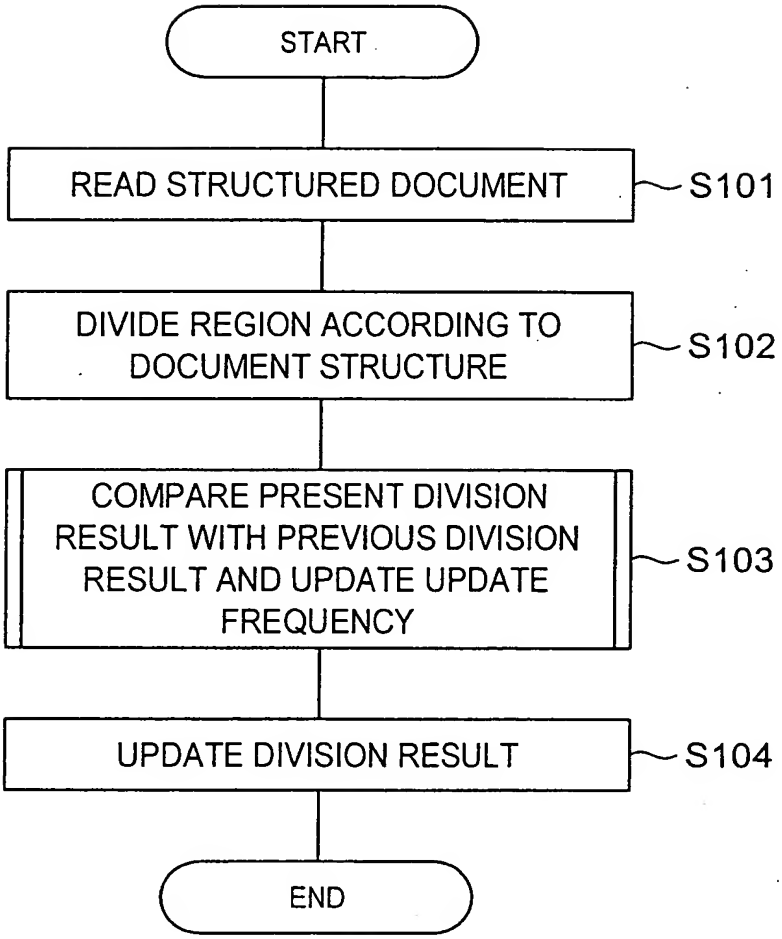

START
READ STRUCTURED DOCUMENT
S101
DIVIDE REGION ACCORDING TO DOCUMENT STRUCTURE
S102
COMPARE PRESENT DIVISION RESULT WITH PREVIOUS DIVISION RESULT AND UPDATE UPDATE FREQUENCY
S103
UPDATE DIVISION RESULT
S104
END

FIG.4A

DP11(URL11)

index.html

```
<IDOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frames//EN">
<HTML>
<HEAD>
<TITLE>XYZ'sHomepage </TITLE>
</HEAD>
<FRAMESET rows="10%,*">
TG12 ~<FRAME src="title.html" name ="title">
<FRAMESET cols="15%,*">
TG13 ~<FRAME src="menu.html" name ="menu">
TG14 ~<FRAME src="main.html" name ="main">
<NOFRAMES>
<P>For visitors who use non-frame browser, click here.</P>
<P><A href="menu.html">MENU</A>
<A href=main.html">main</A></P>
</NOFRAMES>
</FRAMESET>
</HTML>
```

FIG.4B

DP12(URL12)

title.html

```
<HTML>
<HEAD>
<TITLE>title</TITLE>
</HEAD>
<BASEFONT size=7 color=#008000>
<CENTER>
XYZ'sHomepage
</CENTER>
</HTML>
```

FIG.4C

DP13(URL13)

menu.html

```
<HTML>
<HEAD>
<TITLE>menu</TITLE>
</HEAD>
<BODY>
<BASEFONT size=5 color="blue">
<ULL>MENU
<LI><A href="home.html" target="main">HOME</A>
<LI><A href="diary.html" target="main">DIARY</A>
<LI><A href="links.html" target="main">LINKS</A>
</ULL>
</BODY>
</HTML>
```

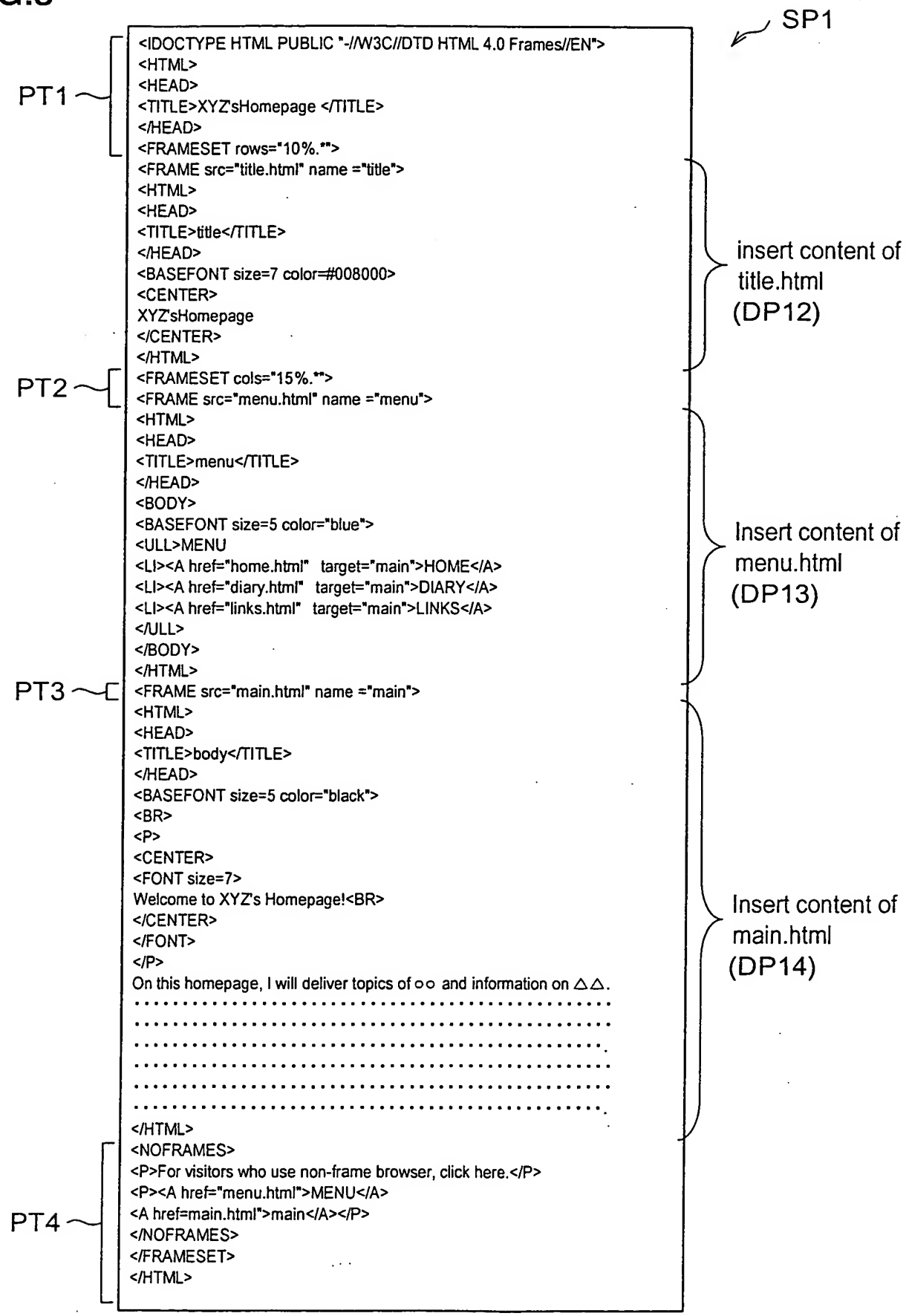
FIG.4D

DP14(URL14)

main.html

```
<HTML>          \U+25B3\U+25B3
<HEAD>
<TITLE>body</TITLE>
</HEAD>
<BASEFONT size=5 color="black">
<BR>
<P>
<CENTER>
<FONT size=7>
Welcome to XYZ's Homepage!<BR>
</CENTER>
</FONT>
</P>
On this homepage, I will deliver topics of ○○ and information on △△.
.....
.....
.....
.....
.....
.....
</HTML>
```

FIG.5


SP1
PT1
PT2
PT3
PT4
<IDOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frames//EN">
<HTML>
<HEAD>
<TITLE>XYZ'sHomepage </TITLE>
</HEAD>
<FRAMESET rows="10%,*">
<FRAME src="title.html" name ="title">
<HTML>
<HEAD>
<TITLE>title</TITLE>
</HEAD>
<BASEFONT size=7 color=#008000>
<CENTER>
XYZ'sHomepage
</CENTER>
</HTML>
<FRAMESET cols="15%,*">
<FRAME src="menu.html" name ="menu">
<HTML>
<HEAD>
<TITLE>menu</TITLE>
</HEAD>
<BODY>
<BASEFONT size=5 color="blue">
<ULL>MENU
<LI><A href="home.html" target="main">HOME</A>
<LI><A href="diary.html" target="main">DIARY</A>
<LI><A href="links.html" target="main">LINKS</A>
</ULL>
</BODY>
</HTML>
<FRAME src="main.html" name ="main">
<HTML>
<HEAD>
<TITLE>body</TITLE>
</HEAD>
<BASEFONT size=5 color="black">

<P>
<CENTER>
<FONT size=7>
Welcome to XYZ's Homepage!
</CENTER>
</FONT>
</P>
On this homepage, I will deliver topics of ○○ and information on △△.
</HTML>
<NOFRAMES>
<P>For visitors who use non-frame browser, click here.</P>
<P><A href="menu.html">MENU</A>
<A href=main.html">main</A></P>
</NOFRAMES>
</FRAMESET>
</HTML>
insert content of title.html (DP12)
Insert content of menu.html (DP13)
Insert content of main.html (DP14)

FIG.6

```
<HTML>
<HEAD>
<TITLE>title</TITLE>
</HEAD>
<BASEFONT size=7 color=#008000>
<CENTER>
XYZ'sHomepage
</CENTER>
</HTML>
```

DP12

```
<HTML>
<HEAD>
<TITLE>menu</TITLE>
</HEAD>
<BODY>
<BASEFONT size=5 color="blue">
<ULL>MENU
<LI><A href="home.html" target="main">HOME</A>
<LI><A href="diary.html" target="main">DIARY</A>
<LI><A href="links.html" target="main">LINKS</A>
</ULL>
</BODY>
</HTML>
```

DP13

```
<HTML>
<HEAD>
<TITLE>body</TITLE>
</HEAD>
<BASEFONT size=5 color="black">
<BR>
<P>
<CENTER>
<FONT size=7>
Welcome to XYZ's Homepage!<BR>
</CENTER>
</FONT>
</P>
On this homepage, I will deliver topics of ○○ and information on △△.
.....
.....
.....
.....
.....
.....
</HTML>
```

DP14

FIG.7

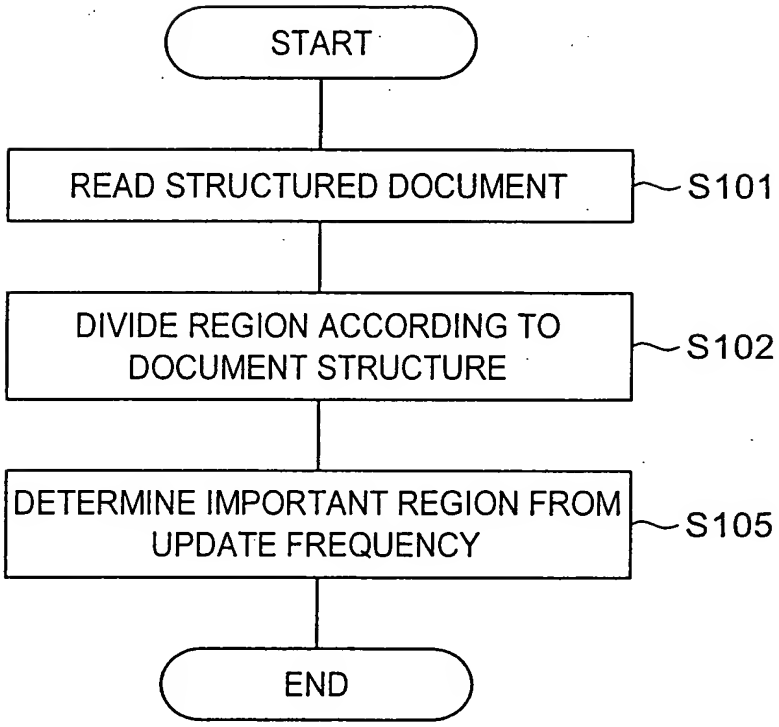

START
READ STRUCTURED DOCUMENT
S101
DIVIDE REGION ACCORDING TO DOCUMENT STRUCTURE
S102
DETERMINE IMPORTANT REGION FROM UPDATE FREQUENCY
S105
END

FIG.8

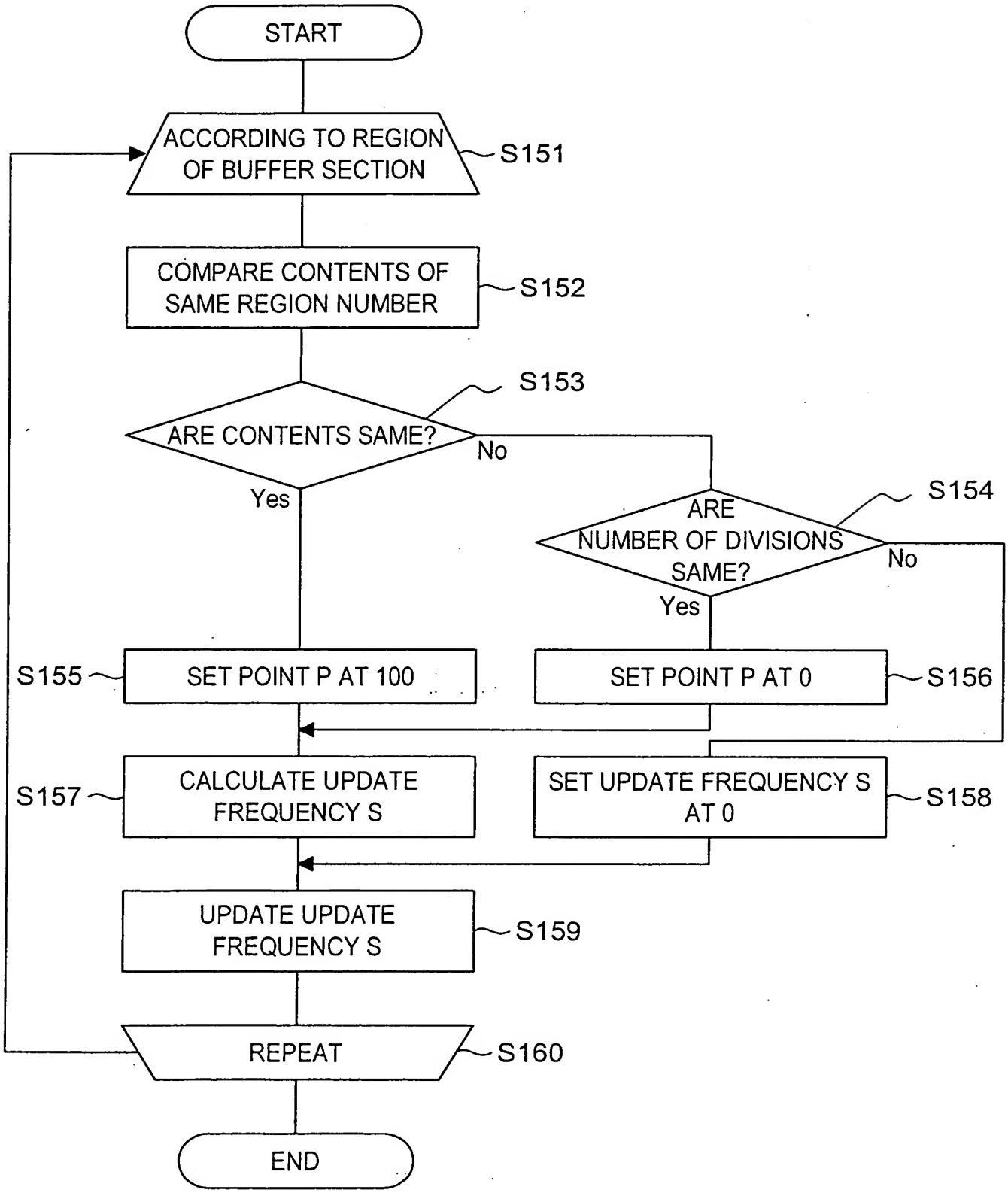

START
ACCORDING TO REGION OF BUFFER SECTION
S151
COMPARE CONTENTS OF SAME REGION NUMBER
S152
S153
ARE CONTENTS SAME?
No
Yes
S154
ARE NUMBER OF DIVISIONS SAME?
No
Yes
S155
SET POINT P AT 100
SET POINT P AT 0
S156
S157
CALCULATE UPDATE FREQUENCY S
SET UPDATE FREQUENCY S AT 0
S158
UPDATE UPDATE FREQUENCY S
S159
REPEAT
S160
END

FIG.9

	COMPARISON RESULT	POINT P	PREVIOUS UPDATE FREQUENCY S_0	UPDATE FREQUENCY S
REGION 1	SAME	100	73	78
REGION 2	SAME	100	73	78
REGION 3	DIFFERENT	0	46	37

if $\alpha = 0.8$

$73 \times 0.8+100 \times (1-0.8) \fallingdotseq 78$

$46 \times 0.8+ \quad 0 \times (1-0.8) \fallingdotseq 37$

FIG.10

	COMPARISON RESULT	POINT P	PREVIOUS UPDATE FREQUENCY S_0	UPDATE FREQUENCY S
REGION 1	SAME	100	73	78
REGION 2	DIFFERENT	—	73	0
REGION 3	DIFFERENT	—	46	0
REGION 4	NO COMPARISON TARGET	—	—	0

FIG.11

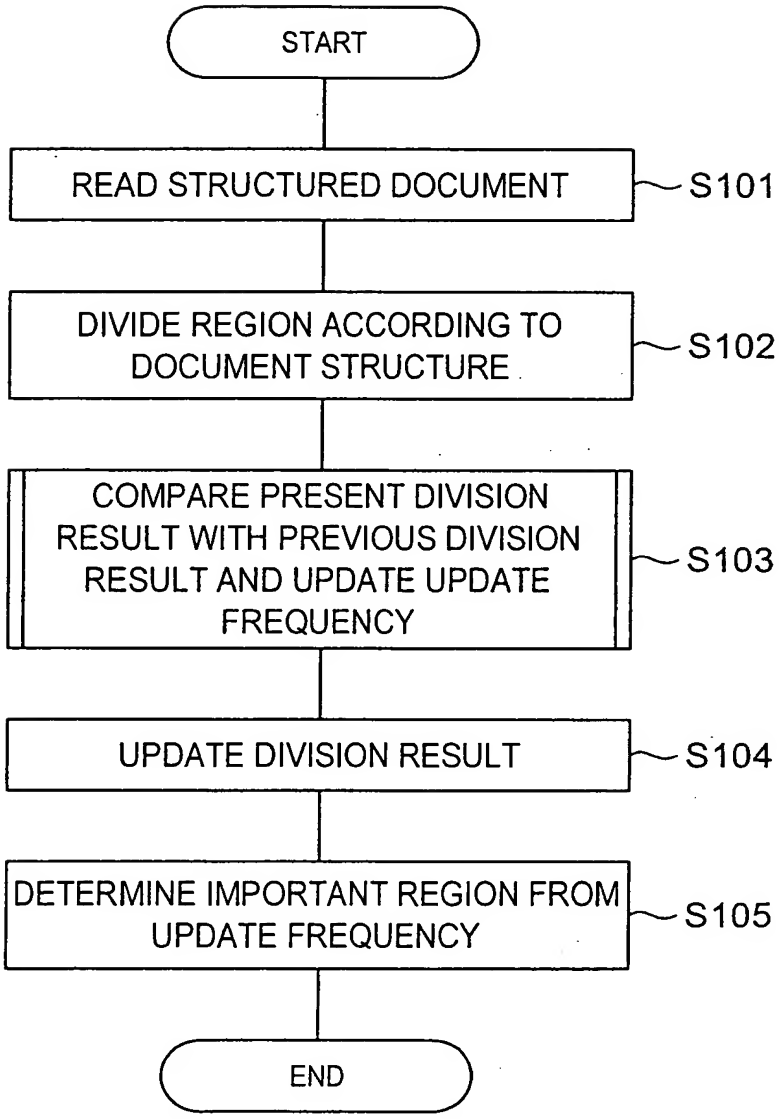

START
READ STRUCTURED DOCUMENT
S101
DIVIDE REGION ACCORDING TO DOCUMENT STRUCTURE
S102
COMPARE PRESENT DIVISION RESULT WITH PREVIOUS DIVISION RESULT AND UPDATE UPDATE FREQUENCY
S103
UPDATE DIVISION RESULT
S104
DETERMINE IMPORTANT REGION FROM UPDATE FREQUENCY
S105
END

FIG.12

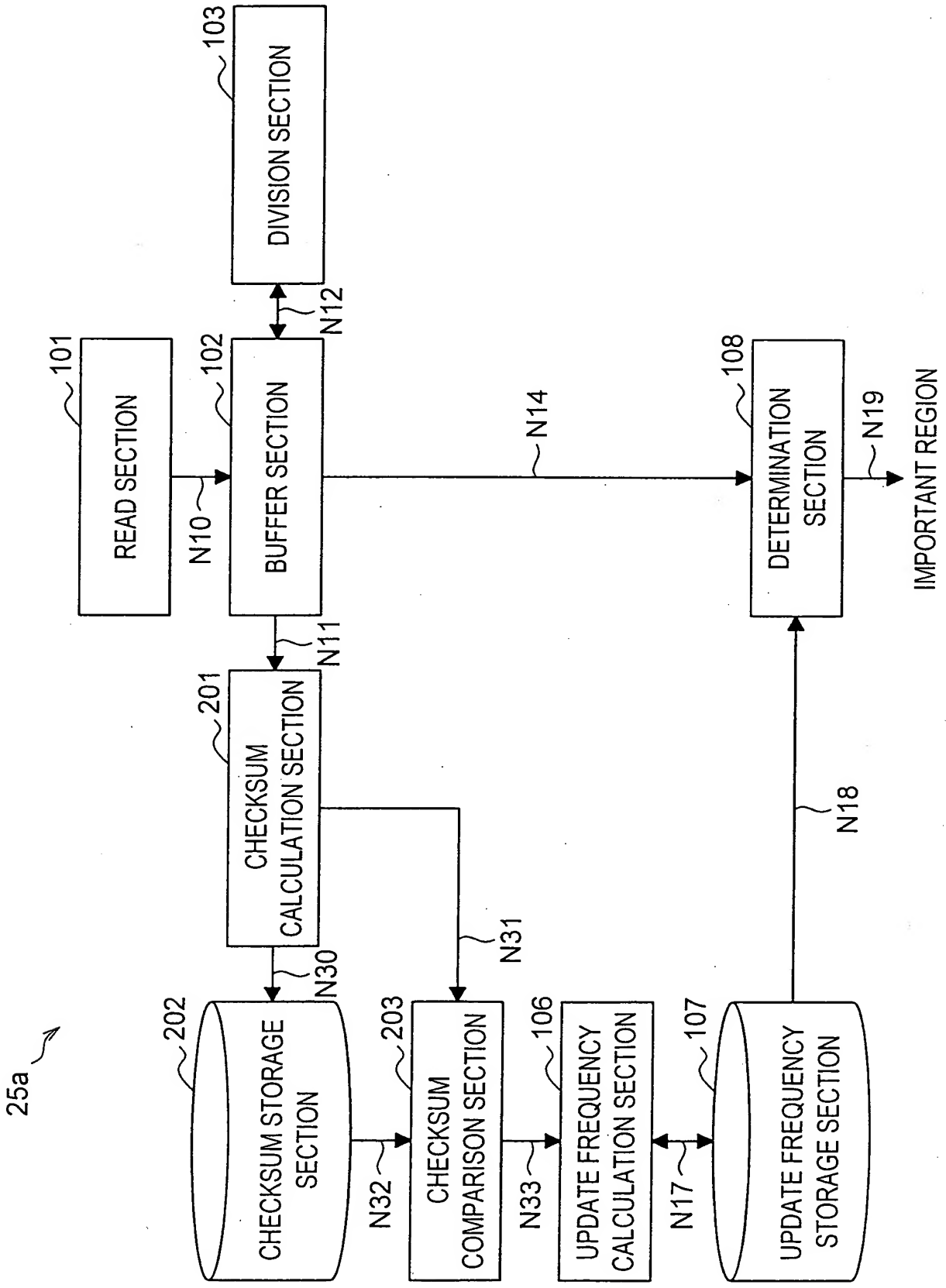

25a
101
READ SECTION
102
BUFFER SECTION
103
DIVISION SECTION
N10
N11
N12
N14
108
DETERMINATION SECTION
N19
IMPORTANT REGION
201
CHECKSUM CALCULATION SECTION
N18
N30
N31
202
CHECKSUM STORAGE SECTION
203
CHECKSUM COMPARISON SECTION
106
UPDATE FREQUENCY CALCULATION SECTION
107
UPDATE FREQUENCY STORAGE SECTION
N32
N33
N17

FIG.13

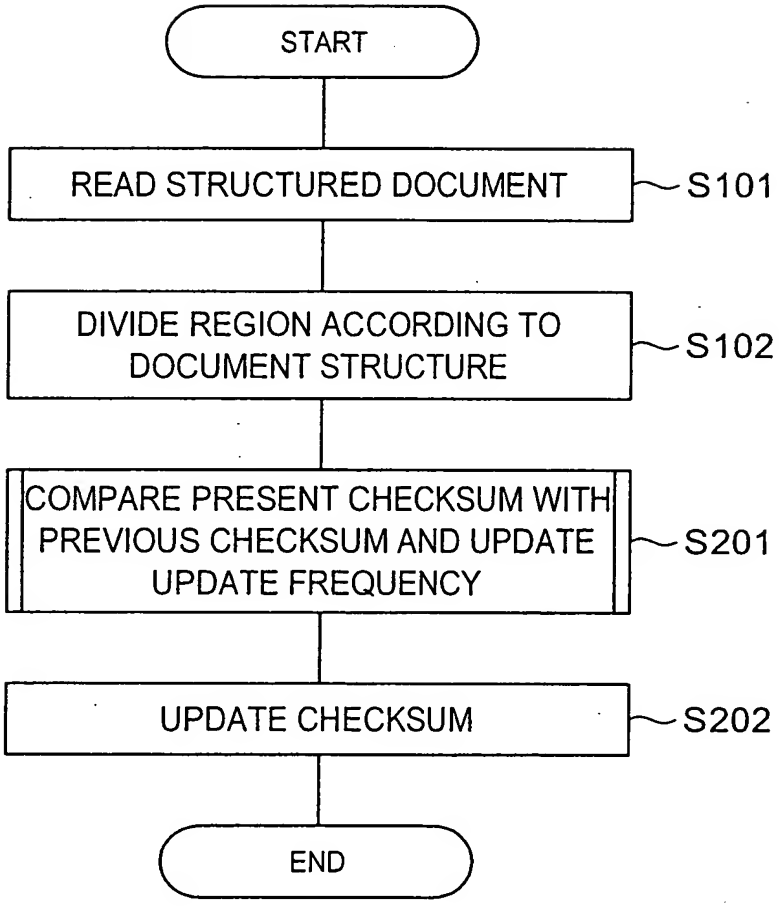

START
READ STRUCTURED DOCUMENT
S101
DIVIDE REGION ACCORDING TO DOCUMENT STRUCTURE
S102
COMPARE PRESENT CHECKSUM WITH PREVIOUS CHECKSUM AND UPDATE UPDATE FREQUENCY
S201
UPDATE CHECKSUM
S202
END

FIG.14

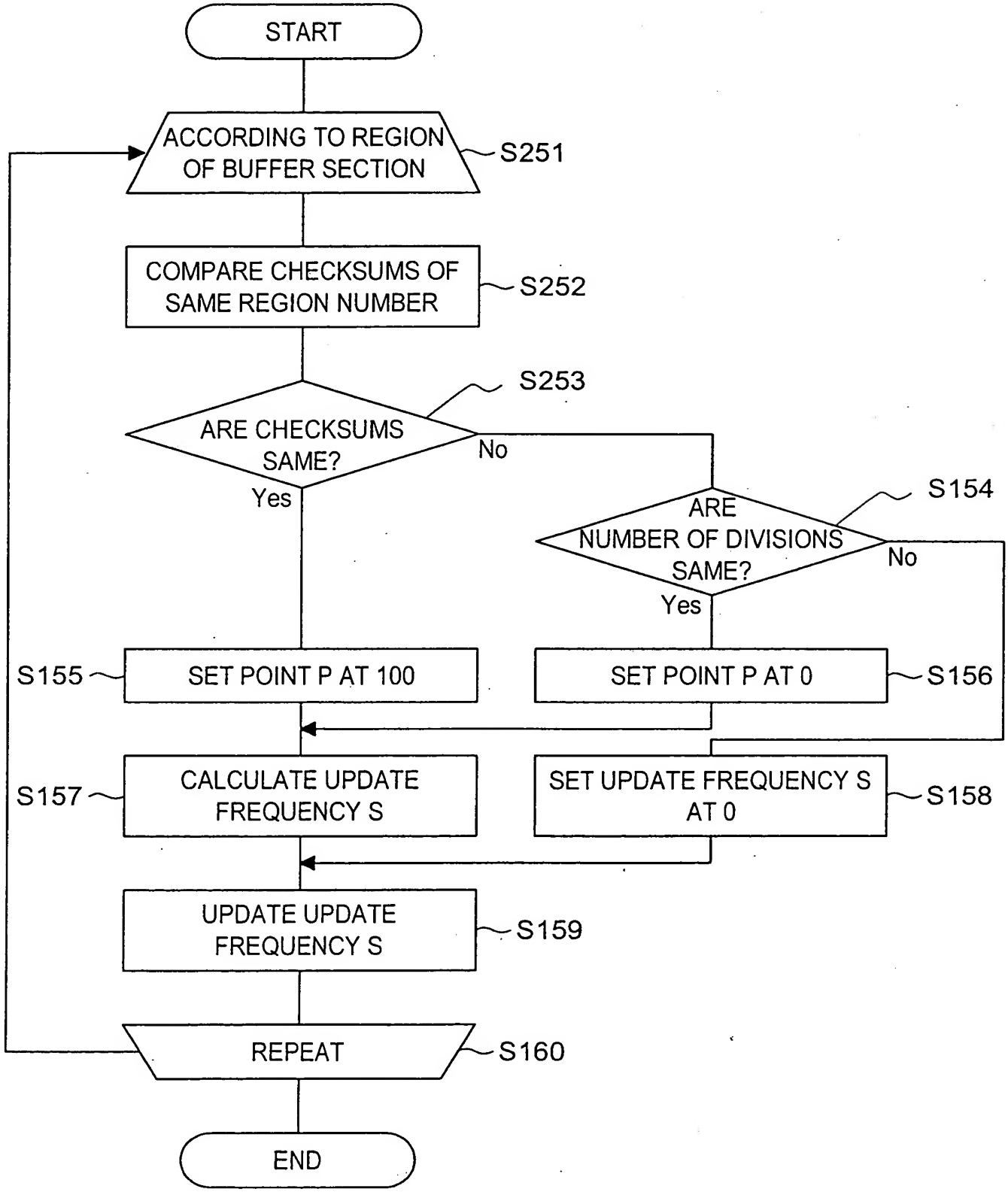

START
ACCORDING TO REGION OF BUFFER SECTION
S251
COMPARE CHECKSUMS OF SAME REGION NUMBER
S252
S253
ARE CHECKSUMS SAME?
No
Yes
S154
ARE NUMBER OF DIVISIONS SAME?
No
Yes
S155
SET POINT P AT 100
SET POINT P AT 0
S156
S157
CALCULATE UPDATE FREQUENCY S
SET UPDATE FREQUENCY S AT 0
S158
UPDATE UPDATE FREQUENCY S
S159
REPEAT
S160
END

FIG.15

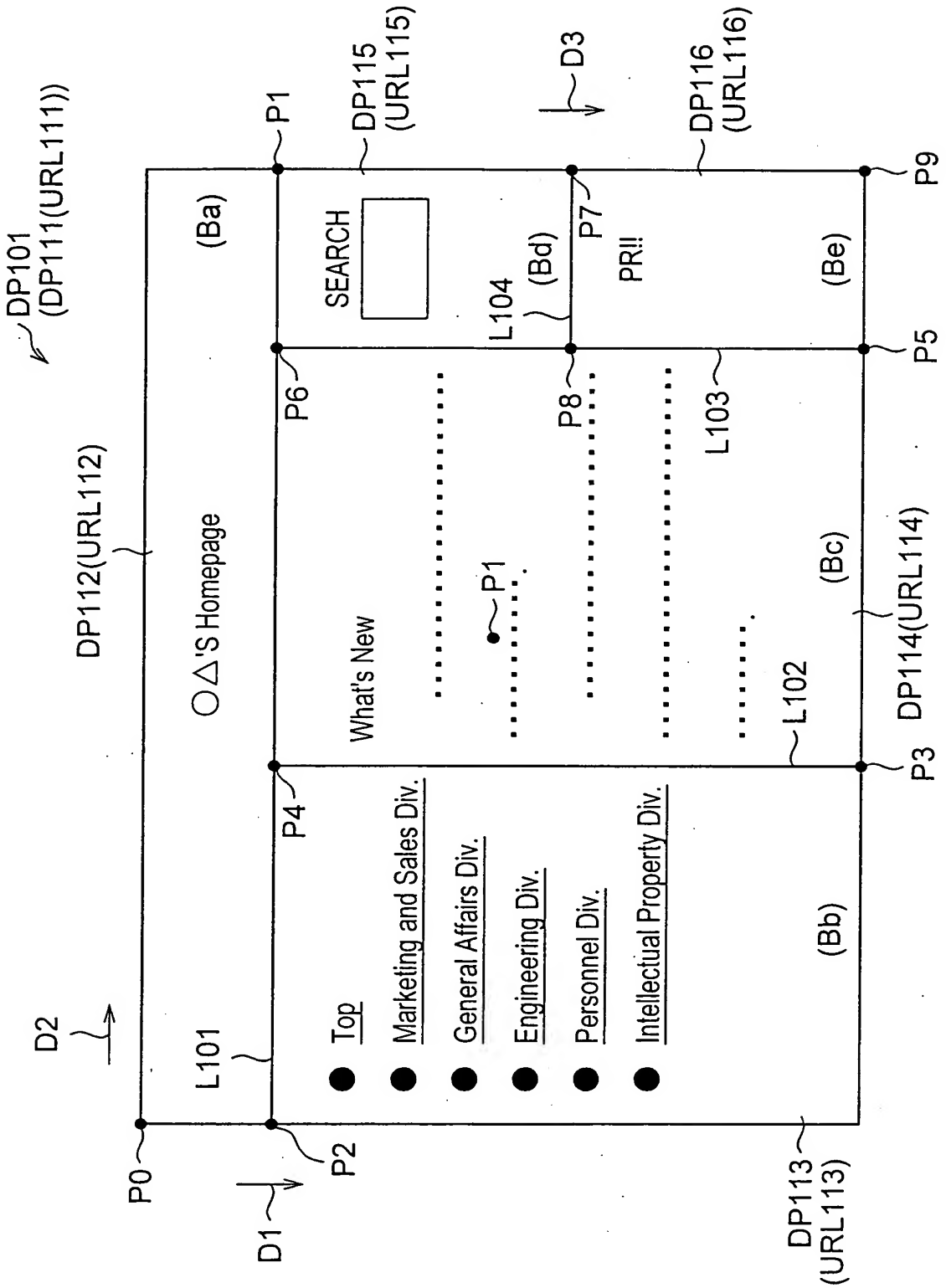

DP101
(DP111(URL111))
DP112(URL112)
○△'S Homepage
(Ba)
P1
DP115
(URL115)
D3
DP116
(URL116)
P9
SEARCH
L104
(Bd)
P7
PR!!
(Be)
P6
P8
L103
P5
P1
What's New
Top
Marketing and Sales Div.
General Affairs Div.
Engineering Div.
Personnel Div.
Intellectual Property Div.
L102
(Bc)
DP114(URL114)
P4
P3
D2
L101
(Bb)
P0
P2
D1
DP113
(URL113)

FIG.16

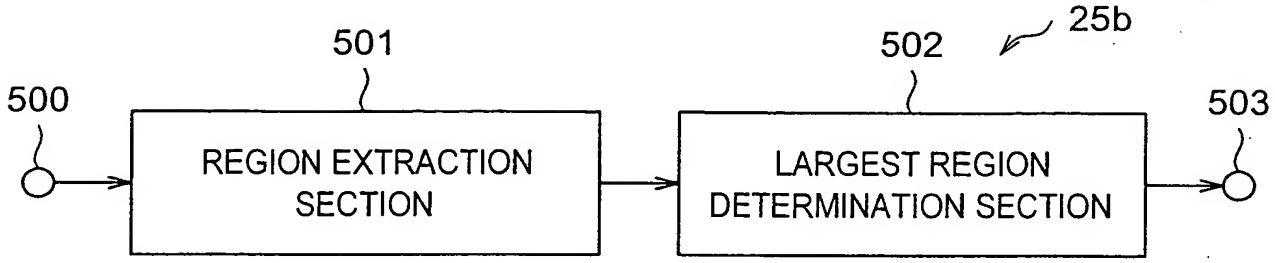


FIG.17

DP111

```
<HTML>

SQ101 ~<FRAMESET ROWS="20%,80%">                    PS1
TG112 ~<FRAME SRC="title.html" >                    ← sources of part (Ba)
SQ102 ~<FRAMESET COLS="30%,50%,20%">
TG113 ~<FRAME SRC="link.html" >                     ← sources of part (Bb)
TG114 ~<FRAME SRC="honbun.html" >                   ← sources of part (Bc)
SQ103 ~<FRAMESET ROWS="50%,50%">
TG115 ~<FRAME SRC="sonota1.html" >                  ← sources of part (Bd)
TG116 ~<FRAME SRC="sonota2.html" >                  ← sources of part (Be)
</FRAMESET>
</FRAMESET>
</FRAMESET>


</HTML>
```

FIG.18

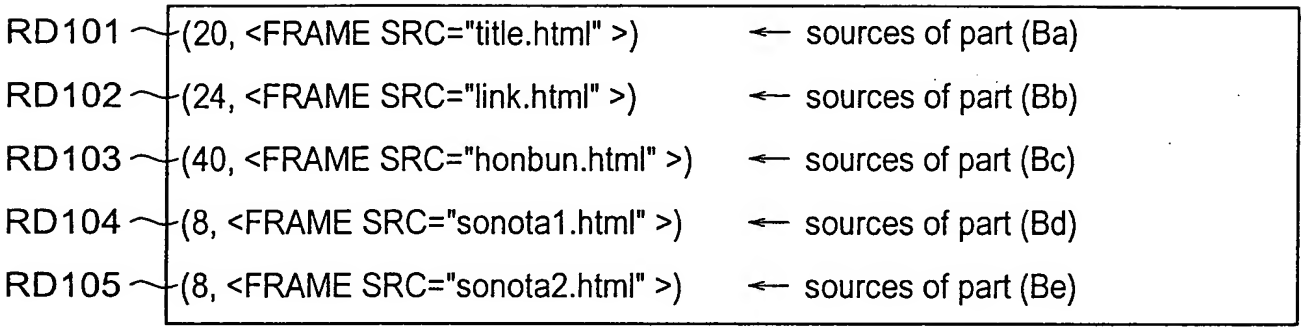

RD101
(20, <FRAME SRC="title.html" >)
← sources of part (Ba)
RD102
(24, <FRAME SRC="link.html" >)
← sources of part (Bb)
RD103
(40, <FRAME SRC="honbun.html" >)
← sources of part (Bc)
RD104
(8, <FRAME SRC="sonota1.html" >)
← sources of part (Bd)
RD105
(8, <FRAME SRC="sonota2.html" >)
← sources of part (Be)

FIG.19

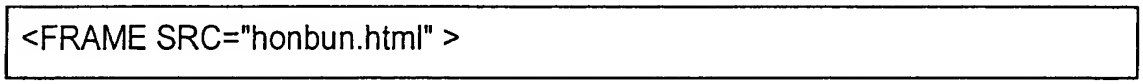

<FRAME SRC="honbun.html" >

FIG.20

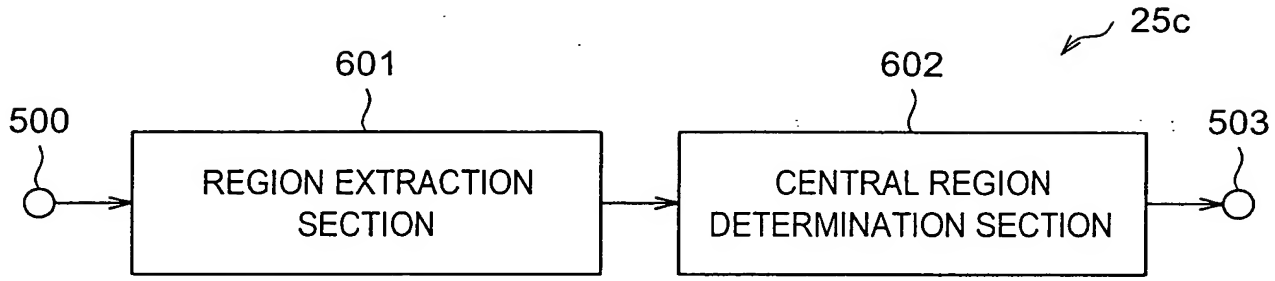


FIG.21

RD111	((0,0), (100,20), <FRAME SRC="title.html" >)	← sources of part (Ba)
RD112	((0,20), (30,100), <FRAME SRC="link.html" >)	← sources of part (Bb)
RD113	((30,20), (80,100), <FRAME SRC="honbun.html" >)	← sources of part (Bc)
RD114	((80,20), (100,60), <FRAME SRC="sonota1.html" >)	← sources of part (Bd)
RD115	((80,60), (100,100) <FRAME SRC="sonota2.html" >)	← sources of part (Be)

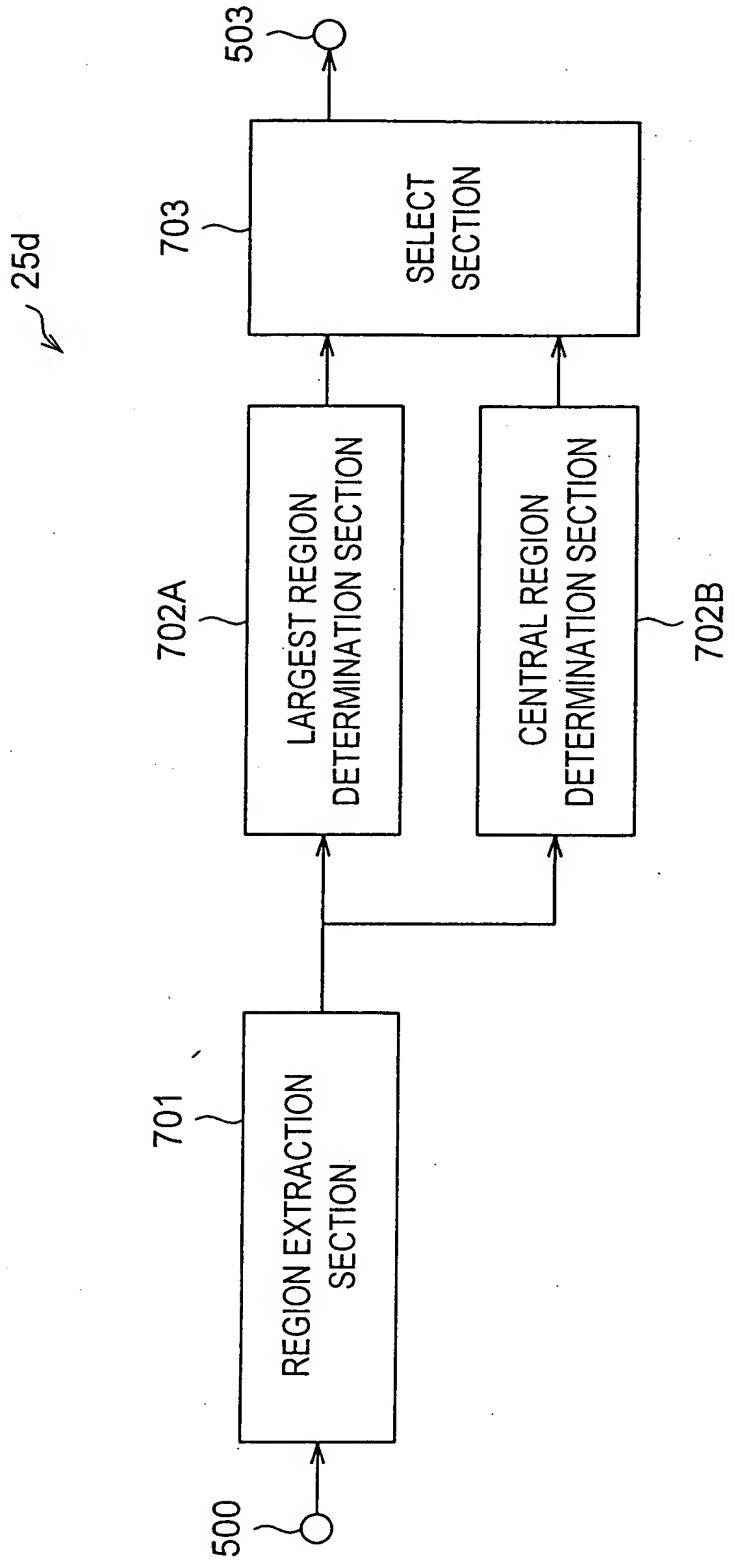

25d
500
REGION EXTRACTION SECTION
701
LARGEST REGION DETERMINATION SECTION
702A
CENTRAL REGION DETERMINATION SECTION
702B
SELECT SECTION
703
503

FIG.22

FIG.23

RD121	(20, (0,0), (100,20), <FRAME SRC="title.html" >)	← sources of part (Ba)
RD122	(24, (0,20), (30,100), <FRAME SRC="link.html" >)	← sources of part (Bb)
RD123	(40, (30,20), (80,100), <FRAME SRC="honbun.html" >)	← sources of part (Bc)
RD124	(8, (80,20), (100,60), <FRAME SRC="sonota1.html" >)	← sources of part (Bd)
RD125	(8, (80,60), (100,100) <FRAME SRC="sonota2.html" >)	← sources of part (Be)

FIG.24

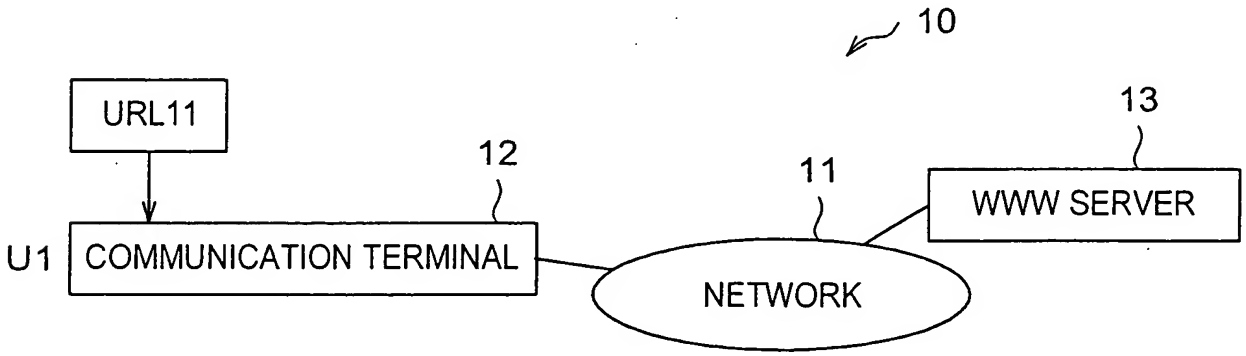


FIG.25

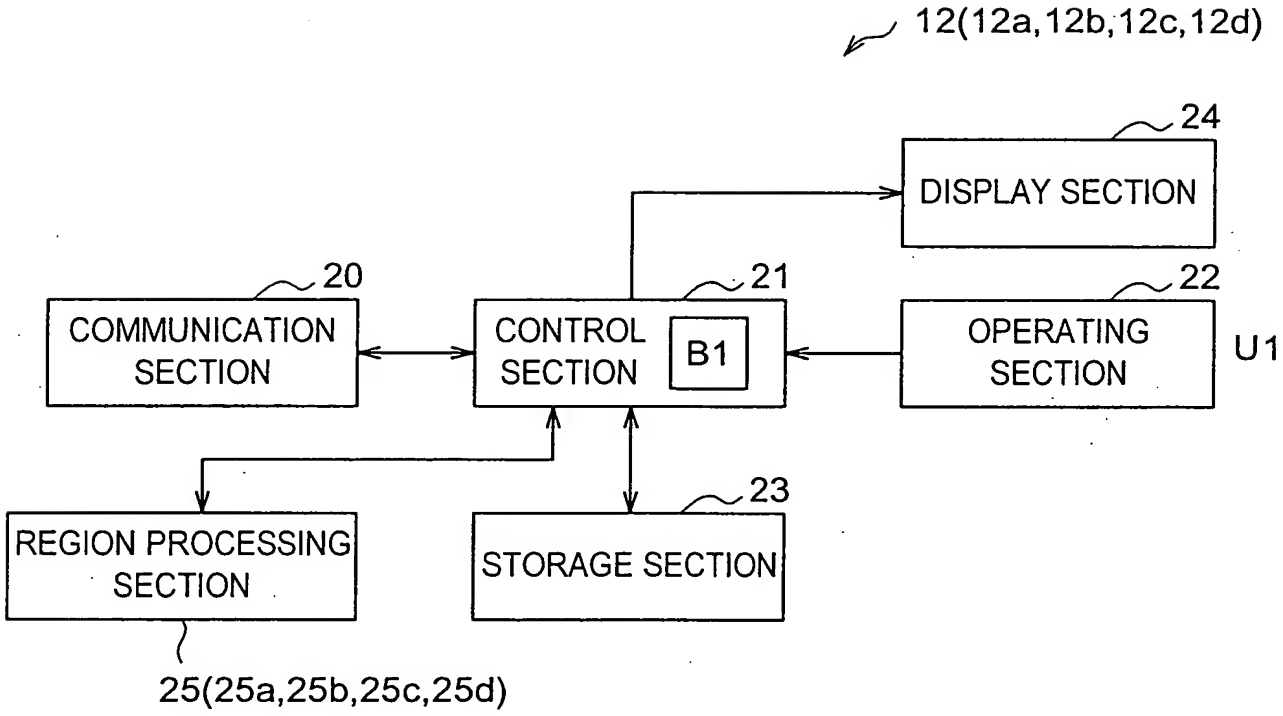
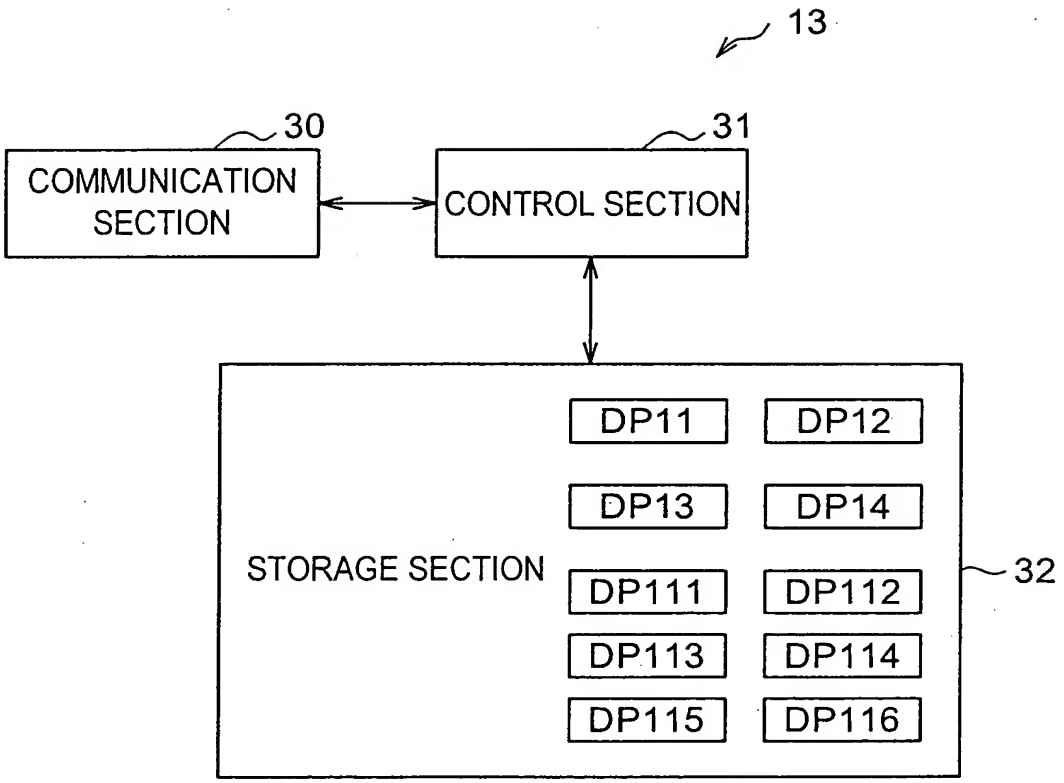

12(12a,12b,12c,12d)
24
DISPLAY SECTION
20
21
22
COMMUNICATION SECTION
CONTROL SECTION
B1
OPERATING SECTION
U1
23
REGION PROCESSING SECTION
STORAGE SECTION
25(25a,25b,25c,25d)

FIG.26


13
30
31
COMMUNICATION SECTION
CONTROL SECTION
STORAGE SECTION
DP11
DP12
DP13
DP14
DP111
DP112
DP113
DP114
DP115
DP116
32